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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,768	02/18/2004	Shinichi Itoh	009270-0308308	1603
909 7590 05/10/2007 PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102			EXAMINER JOERGER, KAITLIN S	
			ART UNIT 3653	PAPER NUMBER
			MAIL DATE 05/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/779,768

Applicant(s)

ITOH ET AL.

Examiner

Kaitlin S. Joerger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-23 is/are pending in the application.
- 4a) Of the above claim(s) 4-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. in view of Kawasaki et al.

Nishida et al. teaches a paper-like material conveying apparatus comprising:

- a drive roller, 12, which is given a driving force, rotated and driven; and
- a driven roller, 20, rotatably following the rotation of the drive roller, the driven roller including a first layer, 23, formed with a solid elastic material, that is in contact with the drive roller and a second layer, 24, formed with a foam elastic material inside the first layer,
- wherein paper-like materials conveyed into the nip between the drive roller and the driven roller are punched, conveyed and carried out and a thickness of the first layer is below $\frac{1}{2}$ of that of the second layer, see figure 3A, compression of the second layer is below 5%, see column 2, lines 59+.

Nishida et al. teaches all of the features of the claimed invention except for a hardness of the second layer that is below 40, but Kawasaki et al. does teach these features.

Kawasaki et al. teaches a paper-like conveying roller with a first layer, 4, and a second layer 3. The dynamic coefficient of friction of the first layer is .25 or more, and more preferably

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3.0 or more, see column 5, lines 1+ for the purpose of successfully providing high quality images free from image failure and improved durability of the roller, see column 2, lines 50+. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an elastic layer with a high coefficient of friction, of more than 3, as taught by Kawasaki et al. for the purpose of conveying paper with high quality images and without image failure through a printing machine.

Kawasaki et al. further teaches a hardness of the second layer, 3, that is below 40, Table 1 shows a hardness of the second layer 4 of 10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a material for the second layer with a hardness below 40, as taught by Kawasaki et al. for the purpose of providing a relatively softer inner layer that was more compressible, and therefore would more stable convey the paper-like material.

With respect to the claimed limitations that the coefficient of dynamic friction between the first layer and paper-like materials is more than .7 and that the thickness of the second layer is more than 1.8 times of the most thick paper-like material, the applicant is reminded that "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." See MPEP 2115. Therefore the claimed limitation relating the coefficient of friction of the first layer to paper being conveyed and the thickness of the second layer to the thickness of the most-thick paper being conveyed holds no patentable weight.

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Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. in view of Kawasaki et al. as applied to claim 1 above, and further in view of Nagatsuka et al.

The combination of Nishida et al. and Kawasaki et al. teach all of the features of the claimed invention except for a tear strength value of the second layer that is above 6 kN/m. Nagatsuka et al. teaches silicone rubber compositions that are used in paper feed rolls for office machines, see column 1, lines 10+, that have a tear strength of above 6kN/m, see example 2, and 3 and the properties shown in Table 1-(2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a material with a tear strength of 6 kN/m or greater for the purpose of have using a material with strong physical properties that is resistant to damage and is more durable.

Response to Arguments

Applicant's arguments filed 2/12/2007 have been fully considered but they are not persuasive. The applicant first argues that Nishida et al. does not teach a roller with a thickness of the first layer is below $\frac{1}{2}$ that of the second layer. According to the applicant's specification the first layer is interpreted to be the outer layer, while the second layer is interpreted to be the inner layer or core layer. Figure 3A of Nishida et al. clearly shows that the first layer (outer layer), 23, of the roller is less than $\frac{1}{2}$ the thickness of the second layer (inner layer), 24. The applicant then argues that the Nishida et al. reference does not teach a coefficient of friction more than .7 and that there is no discussion of a hardness. The examiner admits to this deficiency in Nishida et al., which is why the second reference to Kawasaki et al. is combined with the Nishida et al. reference.

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Regarding the arguments against the Kawasaki et al. reference, the applicant argues that the Kawasaki et al. reference does not teach a compression set below 5%, which is true, because that limitation was taught by Nishida et al. The Kawasaki et al. reference was relied upon to teach a hardness below 40 of the second layer, which it does in Table 1 shown in column 3.

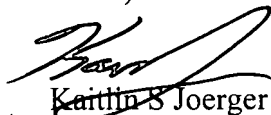
Applicant's arguments, see pages 8 and 9, filed 2/12/2007, with respect to the rejection(s) of claim(s) 2 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly applied prior art to Nagatsuka et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaitlin S. Joerger whose telephone number is 571-272-6938. The examiner can normally be reached on Monday - Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on 571-272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Karlin S Joerger
Examiner
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8 May 2007